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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,460	03/23/2004	Martin Dieterle	248731US0	1228
22850	7590	03/10/2005	EXAMINER PUTTLITZ, KARL J	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			ART UNIT 1621	

DATE MAILED: 03/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/806,460	<b>Applicant(s)</b> DIETERLE ET AL.	
	<b>Examiner</b> Karl J. Puttlitz	<b>Art Unit</b> 1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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### **DETAILED ACTION**

The outstanding rejections under section 112, second paragraph is withdrawn in view of those amendments clarifying the claims.

The rejection under section 103 is withdrawn since the combination of Unverricht and Lonzetta fails to motivate those of ordinary skill to the hourly space velocities of acrolein required in claim 1, step (a).

The rejections under the judicially created doctrine of obviousness-type double patenting over 10/784778, 10/784,825, 10/799754, and 10/808282 are withdrawn since the claims of these co-pending applications, which are drawn to the oxidation of gas mixtures comprising propene, do not provide a reasonable expectation of success for the oxidation of acrolein, which the claims of the instant application are drawn. However, the rejection under this section is maintained for the copending application 10/803,897. The rejection is repeated below. Applicant's remarks in connection with this ground of rejection are also addressed.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA

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1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-8 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1-19 of copending Application No. 10/803897. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the copending application anticipate the rejected claims of the instant application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Applicant argues that process factors that are required by the claims of the copending application do not appear in the present claims. How then would the skilled artisan be motivated to make a number of very significant changes to the claimed process, including omission of two limitations, to arrive at what is the present process with the expectation of achieving a process that attains a high selectivity to acrylic acid product?

However, the examiner maintains that under the obviousness and anticipation analysis of obviousness-type double patenting, the claims of the copending application

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teach or suggest all of the limitations of the instant claims, notwithstanding the fact that the claims of the copending application require more elements. See M.P.E.P. § 804 ("A double patenting rejection of the obviousness-type is "analogous to [a failure to meet] the nonobviousness requirement of 35 USC 103 except that the patent principally underlying the double patenting rejection is not considered prior art. *In re Braithwaite*, 379 F.2d 594, 154 USPQ 29 (CCPA 1967). Therefore, any analysis employed in an obviousness-type double patenting rejection parallels the guidelines for analysis of a 35 USC 103 obviousness determination. *In re Braat*, 937 F.2d 589, 19 USPQ2d 1289 (Fed. Cir. 1991); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985).").

The following is a new ground of rejection necessitated by the Information Disclosure Statement filed 11/8/2004.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE 19948523 (indicated on the International Search Report), as evidenced by counterpart U.S. Patent No. 6,525,217 to Unverricht.

The claims of the application are drawn to, inter alia, a process for partially oxidizing acrolein to acrylic acid in the gas phase under heterogeneous catalysis by conducting a starting reaction gas mixture which comprises acrolein, molecular oxygen and at least one inert gas containing at least 20 % by volume of molecular nitrogen and contains molecular oxygen and the acrolein in a molar  $O_2:C_3H_4O$  ratio of greater than or equal to 0.5 in one reaction stage over a fixed catalyst bed which is arranged in two spatially successive reaction zones A,B, the temperature of reaction zone A being a temperature in the range of 230 to 320 C and the temperature of reaction zone B likewise being a temperature in the range from 230 to 320 C, whose active composition is at least one multimetal oxide comprising the elements Mo and V, in such a way that reaction zone A extends to an acrolein conversion of ranging from 45 to 85 mol % and, on single pass of the starting reaction gas mixture through the overall fixed catalyst bed, the acrolein conversion is greater than or equal to 90 mol % and the selectivity of acrylic acid formation, based on acrolein converted, is greater than or equal to 90 mol %, the chronological sequence in which the starting reaction gas mixture flows through the reaction zones corresponding to the alphabetic sequence of the reaction zones, wherein

a) the hourly space velocity of the acrolein contained in the starting reaction gas mixture on over the fixed catalyst bed is greter than or equal to 145 l (STP) of acrolein/l of fixed catalyst bed h and greater than or equal to 70 l (STP) of acrolein/l of fixed catalyst bed,

b) the volume-specific activity of the fixed catalyst bed is either constant or increases at least once in the flow direction of the reaction gas mixture over the fixed catalyst bed, and

c) the difference  $T^{\max A} - T^{\max b}$ , determined from the highest temperature  $T^{\max A}$  which the reaction gas mixture has within the reaction zone A and the highest temperature  $T^{\max b}$  which the reaction gas mixture has within reaction zone B is greater than or equal to 0 C. See claim 1.

Unverricht teaches a process for the catalytic gas-phase oxidation of propene to acrylic acid, in which the reaction gas starting mixture is oxidized, with an increased propene loading, in a first reaction stage, over a first fixed-bed catalyst and then the acrolein-containing product gas mixture of the first reaction stage is oxidized, in a second reaction stage.

The second reaction stage of the novel process can of course also be realized, in a manner corresponding to the first reaction stage, as two spatially successive reaction zones C, D, the temperature of the reaction zone C expediently being from 230 to 270 C and the temperature of the reaction zone D from 250 to 300 C and at the same time at least 10 C above the temperature of the reaction zone C. See column 13, lines 57-63.

The hourly space velocities are given at column 14, lines 18-25.

The difference between the process coveredd in the rejected claims and the process disclosed in Unverricht is that Unverricht fails to explicitly teach that the difference  $T^{\max A} - T^{\max b}$ , determined from the highest temperature  $T^{\max A}$  which the reaction gas mixture has within the reaction zone A and the highest temperature  $T^{\max b}$

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which the reaction gas mixture has within reaction zone B is greater than or equal to 0

C. See step (c).

However, with regard to step c noted above, the examiner notes that the  $T^{\max A} - T^{\max B}$  can be zero. In this regard, the maximum temperatures of the zones C and D of Unverricht may be the same, and therefore, meet this requirement of the claim.

Therefore, the difference between Unverricht and the claimed inventions is that Unverricht does not teach the invention with particularity so as to amount to anticipation (See M.P.E.P. § 2131: "[t]he identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim, but this is not an *ipsissimis verbis* test, i.e., identity of terminology is not required. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).). However, based on the above, Unverricht teaches the elements of the claimed invention with sufficient guidance, particularity, and with a reasonable expectation of success, that the invention would be *prima facie* obvious to one of ordinary skill (the prior art reference teaches or suggests all the claim limitations with a reasonable expectation of success. See M.P.E.P. § 2143).

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl J. Puttlitz whose telephone number is (571) 272-0645. The examiner can normally be reached on Monday-Friday (alternate).

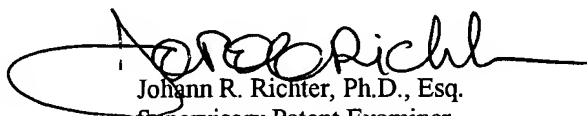


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on (571) 272-0646.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist.

Karl J. Puttlitz  
*Assistant Examiner*



Johann R. Richter, Ph.D., Esq.  
Supervisory Patent Examiner  
Biotechnology and Organic Chemistry  
Art Unit 1621  
(571) 272-0646